THE FUR SEAL OF THE CALIFORNIA ISLANDS

WITH NEW DESCRIPTIVE AND HISTORICAL MATTER

By Charles Haskins Townsend

Director of the New York Aquarium

(Figs. 345–356 incl.)

The re-appearance in 1928 of this long-missing species of the genus *Arctocephalus* is a matter of interest chiefly to naturalists. The fishery interests of our west coast have long since forgotten its former commercial importance.

It was once abundant from southern Lower California northward to the latitude of San Francisco. It was apparently the principal object of a sealing industry during the early part of the nineteenth century, which included also the taking of the northern elephant seal for its valuable oil.

The history of the sealing operations that so rapidly reduced its numbers is unfortunately fragmentary. Although taken in large numbers, it has not yet been shown that the value of the fur seal skins sold, exceeded that of the oil of the elephant seals taken in the same region during the same period. We only know that the capture of both species was conducted so persistently that their commercial importance amounted to but little after the middle of the century.

Exact information relative to fur sealing in this region earlier than the year 1806 has not yet been brought to light. In Mariner's history of the Tonga Islands, published in London in 1827, there is

a record showing that fur seals were being taken at the San Benita Islands in 1806. The *Port au Prince*, whaler and privateer, sailing from Gravesend, England, reached Ceros Island off Lower California on August 1, 1806. It was determined between the captain and the whaling master "that the *Port au Prince* should proceed for the Island of Ceros, to make up for her ill-success in her whaling cruise, by laying in a cargo of elephant oil and seal skins."—"She left Ceros on the 23rd August and on the 25th came to anchor at the Benita Islands, where she remained until the 15th of September, having salted and laid in 8,338 seal-skins." Another early record relates to the ship "*Dromio* of Boston, which in 1807, at "Shelvock Island," alleged to be southwest of Cape San Lucas, in latitude 21°, in a fortnight killed 3000 fur seals." The position of this island is unknown. It may have been Socorro Island where Morrell in 1825 observed "fur seals," but was without doubt an island of the Lower California region.

It is certain that the islands of Lower California were well known to whalers and sealers prior to the visit of the *Port au Prince* and had been exploited for both fur and elephant seals. "Many whalers, sealers and otter hunters between 1800 and 1825 frequented the west coast of Lower California."—"In some years there are reported to have been not less than thirty different whaling and sealing camps below San Diego, aggregating some 2000 men and as seals, and the affiliated families, are in the greatest abundance, cargoes are often prepared with great rapidity."[1]

The researches of Dr. E. C. Starks, respecting the identity of the fur seal formerly abundant at the Farallon Islands, have shown that the many thousands of seals taken there belonged to the genus *Arctocephalus* and could not have been the northern fur seal *Callotaria*.[2]

The records found by Dr. Starks account for the killing of 73,402 fur seals at the Farallons between 1810 and 1812. The taking of fur seals at these islands was continued from 1812 to 1824 by Russians who secured 1200 to 1500 skins annually for five or six years. "After 1818 the seals diminished rapidly until only 200 or 300 per year could be caught." From 1824 to 1833 sealing was carried

[1] J. Ross Browne, Lower California. 1859.

[2] Records of the Capture of Fur Seals on Land in California, Edwin C. Starks, Calif. Fish and Game. Vol. 8, No. 3, pp. 155–160. July, 1922.

on there, over 1,000 being taken the first year, the catch diminishing until only 54 were secured the last year. From this time until toward the close of the century, a few fur seals were taken from time to time on the Santa Barbara Islands.

The present writer's interest in the fur seal of this region did not begin until 1892, when he was sent by the Department of State to Guadalupe Island, Lower California, to identify the species of fur seal reported to exist there.[3] Only seven fur seals were seen—none of them on land and none were secured. The identity of the species was established, however, by Dr. C. Hart Merriam, who studied the four weather-worn skulls we found there and who described the species as *Arctocephalus townsendi*.[4]

Returning from Guadalupe Island, to San Diego, I interviewed certain persons who had formerly been engaged in sealing at Guadalupe and other islands of Lower California. The result of the inquiry was considerable information on the seal hunting which had brought this species so close to extermination. It appears from the records then secured that between 1876 and 1892 not less than 5,575 fur seals were taken at Guadalupe and San Benita islands.

Through the kindness of Mr. A. W. Anthony of San Diego, who was with me at Guadalupe in 1892, I have recently received extracts from a logbook kept by Captain George W. Chase, recording his voyages in search of fur seals to islands off Lower California. From 1878 to 1880 Captain Chase took 217 fur seals at Guadalupe Island. Of these 114 were sold at San Diego for $1,600. Another lot of 73 sold for $1,300. Interesting notes in Chase's log refer to eight other sealing vessels met with repeatedly during his cruises to Guadalupe, San Benita, Cerros, San Geronimo, San Roque and Asuncion islands. He makes no mention of catches made by these vessels, but frequently complains of their interference with his hunting and of the scarcity of fur seals.

The following records relative to fur sealing in Lower California waters, copied from San Diego newspapers of the years 1879 to 1881. have been received through the kindness of Mrs. Belle J. Benchley of the San Diego Zoological Society:

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[3] Notes on the Fur Seals of Guadalupe, the Galapagos and Lobos Islands. C. H. Townsend Rept. Fur Seal Ind. 1896–7. Pt. 3. pp. 265–70.

[4] A New Fur-Seal or Sea Bear. C. Hart Merriam. Proc. Biol. Soc. Wash. Vol. XI. pp. 175–178.

1879. Schooner *Ellen*. Joe Burges, master, arrived September 27 "with 150 skins."
1879. Sloop *Annie Herring*. J. M. Niles, master; arrived November 16, with "a catch for which $950. has been offered."
1880. Schooner *John Stillson*. Joe Peterson, master, arrived January 13, "seal skins."
1880. Sloop *Annie Herring*. J. M. Niles, master, arrived January 24 with a "hundred or more fur seal skins."
1880. Sloop *Isabelle*. W. J. England, master, arrived June 9 with "a cargo of seal skins and oil." A portion of the catch was sold for $1600.
1880. Schooner *John Stillson*. Joe Peterson, master, arrived July 6 "with some two hundred fur seal skins and several fine sea otters."
1880. Schooner *Ellen*. Joe Burges, master, arrived July 27 "with a catch of four hundred seal skins."
1880. Schooner *Anastasia*. Cashman, master, arrived August 14 from Guadalupe Island, "with a cargo of seal skins."
1881. Sloop *Brisk*. Jones, master, arrived March 22, "laden with seal skins."
1881. Schooner *Liberty*. Arrived April 20, "with a lot of fur seal skins."
1881. Sloop *Isabella*. W. J. England, master, arrived July 6 from Guadalupe Island with "fur seal skins and sea elephant oil."
1881. Sloop *Brisk*. Jones, master, arrived July 10, "with a cargo of seal skins."

There are in connection with the above records, those of five other sealing vessels reported as arriving but no mention is made of catch. All are of interest as showing that the hunting of fur seals in Lower California waters was practiced during the period covered by the records.

The total number of seal skins taken by these twelve vessels is unknown. Four of them, *Ellen, Herring* and *Stillson* as shown above, reported catches to the number of 850. If the other eight voyages yielded skins at the same rate, we might assume a total of 2550 seal skins for the above mentioned vessels.

There appears to be no information relative to the existence of this seal subsequent to the year 1894 and it was supposed to be extinct. It was a matter of decided interest to naturalists when the San Diego Zoological Garden received two adult males on April 25, 1928.[5] They were captured at Guadalupe Island by Capt. Wm. O. Clover, and I had the opportunity of examining them shortly after

[5] The Guadalupe Fur Seal. Harry W. Wegeforth. San Diego Zoonooz. May–June, 1928. pp. 4–9.

they were brought to San Diego. Previous acquaintance with fur seals of the genus *Arctocephalus* in the Straits of Magellan, enabled me to confirm at once the identification of those from Guadalupe Island. Both were full grown, each having developed the grizzled mane of the adult fur seal. Both animals had the flattened head and sharply-pointed nose that so readily distinguishes *Arctocephalus* from the northern genus *Callotaria*.

Many photographs of the two seals were made by direction of Dr. H. M. Wegeforth, president of the San Diego Zoological Society, to whom I am indebted for those reproduced here, and also for the skin and skeleton of one of the seals which died in 1929.[6]

The species described by Merriam having been based on weather-worn and imperfect skulls, may now be described more fully from a perfect skull and skin—the first available for the purpose.

Fortunately the carcase of this seal had been carefully measured by Dr. R. A. Whiting, pathologist of the San Diego Zoological Society. Its weight at death was 221 pounds. These measurements, as compared with those of a freshly-killed, seven-year-old, Pribilof male, weighing 319 pounds, indicate that it was of rather smaller size. During its decline it lost greatly in weight, and it may have been somewhat younger than the Pribilof animal.

The skull has been compared with other adult skulls of *Arctocephalus* collected by me in the Straits of Magellan and at the Galapagos Islands in 1888. The characters pointed out by Merriam in the examination of the weatherworn type skull, hold good in the fresh and perfect specimen—especially in the narrow palate, flattened bullae and broad zygomatic root of maxilla.

Measurements of Perfect Skull of Male

Arctocephalus townsendi, Merriam:[7]

Greatest basal length, 248 mm.
Same in skull from Straits of Magellan, 258 mm.
Same in skull from Galapagos Islands, 265 mm.
Basal length (gnathion to basion), 233 mm.
Basilar length of Hensel (basion to incisors), 223 mm.
Palatine length (gnathion to postpalatal notch), 120 mm.

[6] Skin and skeleton now in Am. Museum of Natural History, New York.
[7] Measurements by C. H. Townsend and H. E. Anthony.

Postpalatal length (postpalatal notch to basion), 113 mm.
Zygomatic breadth, 135 mm.
Lateral series of teeth (canine to last molar inclusive), 88 mm.
Same in skull from Straits of Magellan, 77 mm.
Same in skull from Galapagos Islands, 84 mm.
Distance between canines, 20.5 mm.
Distance between 3rd pair of molariform teeth, 23 mm.
Same in skull from Straits of Magellan, 31 mm.
Same in skull from Galapagos Islands, 30 mm.
Breadth (anteroposterior) of zygomatic root of maxilla between inferior li of antorbital foramen and orbit, 18 mm.
Same in skull from Straits of Magellan, 15 mm.
Same in skull from Galapagos Islands, 16.5 mm.
Least interorbital breadth (anterior to supraorbital processes), 24 mm.
Least interorbital breadth (posterior to supraorbital processes), 21 mm.
Breadth across supraorbital processes, 47 mm.
Greatest length of nasals (nasals lost in type specimen), 38 mm.
Same in skull from Straits of Magellan, 46 mm.
Anterior breadth of nasals, 27 mm.
Same in skull from Straits of Magellan, 25 mm.
Breadth of rostrum (in plane of 2nd molar), 46 mm.
Mastoid breadth, 119 mm.
Breadth of brain case at fronto-parietal suture, 81 mm.
Greatest length of ramus, 172 mm.
Length of mandibular tooth row from incisors, 82 mm.
Same in skull from Straits of Magellan, 75 mm.
The skull from the Galapagos Islands (*Arctocephalus philippii*), has a ver high sagittal crest—25 mm. at greatest height.
The crest is absent in skulls from Guadalupe Island (*A. townsendi*) an Straits of Magellan (*A. australis*).

MEASUREMENTS OF THE CARCASE (Male, weight 221 pounds)[8]

Dorsal length, tip of nose to tip of tail, 71½ inches.
Ventral length, tip of lower lip to tail, 64 inches.
Girth of head around eyes, 14 inches.
Girth at neck immediately behind ears, 25½ inches.
Girth at shoulders, 45 inches.
Girth at axillae within lateral flippers, 47 inches.
Girth at tip of lateral flippers, 39 inches.
Girth, at base of tail, just anterior to rear flippers, 20½ inches.
Length lateral flippers, axilla to flipper tip, 20½ inches.
Girth of lateral flipper at shoulder, 12½ inches.
Length rear flippers, base of tail to flipper tip 16 inches.

[8] Measurements by Dr. R. A. Whiting, Pathologist, Zool. Soc. of San Diego.

ADDITIONAL MEASUREMENTS (From the Half-dried Skin)[9]

Length of tail, including hairs on tip, 63 mm.
Length of bare surface of fore flipper—anterior border, 305 mm.
Length of bare surface of fore flipper—posterior border, 292 mm.
Breadth of fore flipper at 4th claw, 146 mm.
Length of exposed scratching claws—hind flipper, 32 mm.

Color. Body with buff underfur, which on top of head and back has a length of 1 cm.

Hair of body dusky black, grayish on head and shoulders. Gray of head extending forward to between eyes and to below ears. Color of belly not so dark as back. Length of hair on head and back 3.5 cm. Skin of nose dusky black. Short hair of face rufous, extending around eyes. Short hair at base of fore limb rufous. Bristles about twenty, ivory white, longest 7.9 cm. Length of ear 3.2 cm.

While the general appearance of the living animal is not unlike that of the adult male seal of the Pribilofs, it is instantly distinguishable by the more flattened head and the longer and more sharply pointed snout. This is characteristic of other species of *Arctocephalus* and is apparent in the accompanying photograph of a female fur seal from the Cape of Good Hope (*Arctocephalus capensis*) now living in the New York Zoological Park. The photographs of the northern fur seal (*Callotaria ursina*) are presented for comparison.

Little is known of the habits of the California fur seal. Like the equatorial species (*Arctocephalus philippi*) of the Galapagos Islands, it had the habit of occupying caves along the shore line. Sealers killed many in such places, often using lanterns to locate the animals.

It appears that the young were born in June and July. The limited numbers of fur seals recently ascertained to frequent the shores of Guadalupe Island, are apparently moving to some extent about the former range of the species. Recent reports by fishermen, of fur seals seen in the vicinity of the Santa Barbara Islands *in summer*, must relate to the California fur seal and not the Alaskan species which resorts to Bering Sea in summer.

It is unfortunate that the convention providing for the preservation of the northern fur seal, does not protect the California species south of the thirtieth parallel of north latitude and thus include Guadalupe Island some fifty miles farther south. Its preser-

[9] Measurements by C. H. Townsend.

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[9] Measurements by C. H. Townsend.

vation there must depend chiefly upon the effectiveness of the regulations established by the government of Mexico.

The remnant of this species still in existence was roughly estimated at about sixty animals when discovered in 1928. It represents a resource worth preservation.

The immensely valuable fur seal herd of the Pribilof Islands, as a result of long-continued pelagic sealing, became reduced to less than 125,000 animals by the year 1911. It has, under the protection afforded by the North Pacific Sealing Convention of that year, already increased to more than a million seals and the killing of surplus males for commercial purposes has been resumed.

Fig. 346. *Upper.* California fur seal. *Arctocephalus townsendi,* Merriam. Adult males. Zoological Garden, San Diego, California. The first known specimens in captivity.
Fig. 347. *Lower.* California fur seal, *Arctocephalus townsendi,* Merriam. Adult male. Zoological Garden, San Diego, California

Fig. 348. *Upper.* California fur seal, *Arctocephalus townsendi*, Merriam. Adult male. Zoological Garden, San Diego, California. Fig. 349. *Lower.* California fur seal, *Arctocephalus townsendi*, Merriam. Adult male.

Fig. 350. *Upper.* Shore of Guadalupe Island, where two fur seals were captured in April, 1928. Fig. 351. *Lower.* Cape fur seal, *Arctocephalus capensis.* Female. Cape of Good Hope. From a specimen living in the New York Zoological Park.

Fig. 352. *Upper.* Northern fur seal, *Callotaria ursina.* Adult male. Pribilof Islands, Bering Sea. Fig. 352. *Lower.* Northern fur seal, *Callotaria ursina.* Adult male. Pribilof Islands, Bering Sea.

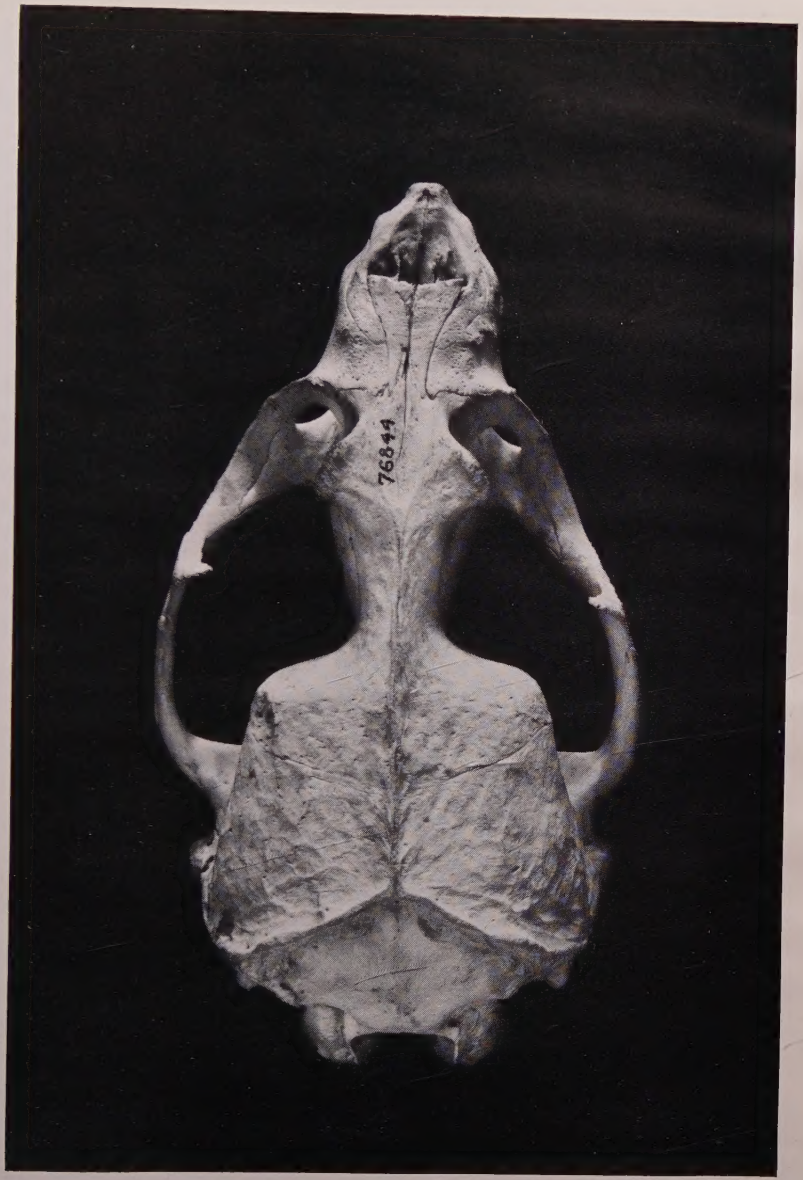

Fig. 354. *Arctocephalus townsendi*, Merriam. Guadalupe Island, Lower California. 1928. Adult male. Photograph from the American Museum of Natural History.

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